

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: METALUX

Report Number: P894047

Luminaire Tested: 4MB-9HL-LVRA-UNV-L940

Issue Date: 11/11/2024

Test Information

Test Method: LM-79-2019
Report Number: P894047
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-26)
Test Lab: INNOVATION CENTER
Issue Date: 11/11/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: 4MB-9HL-LVRA-UNV-L940
Description: 9000 Lumen 4FT MICROBAY LINEAR BAY with LOUVER WITH AISLE OPTIC, 90CRI, 4000K CCT
Light Source: -
Ballast/Driver: -

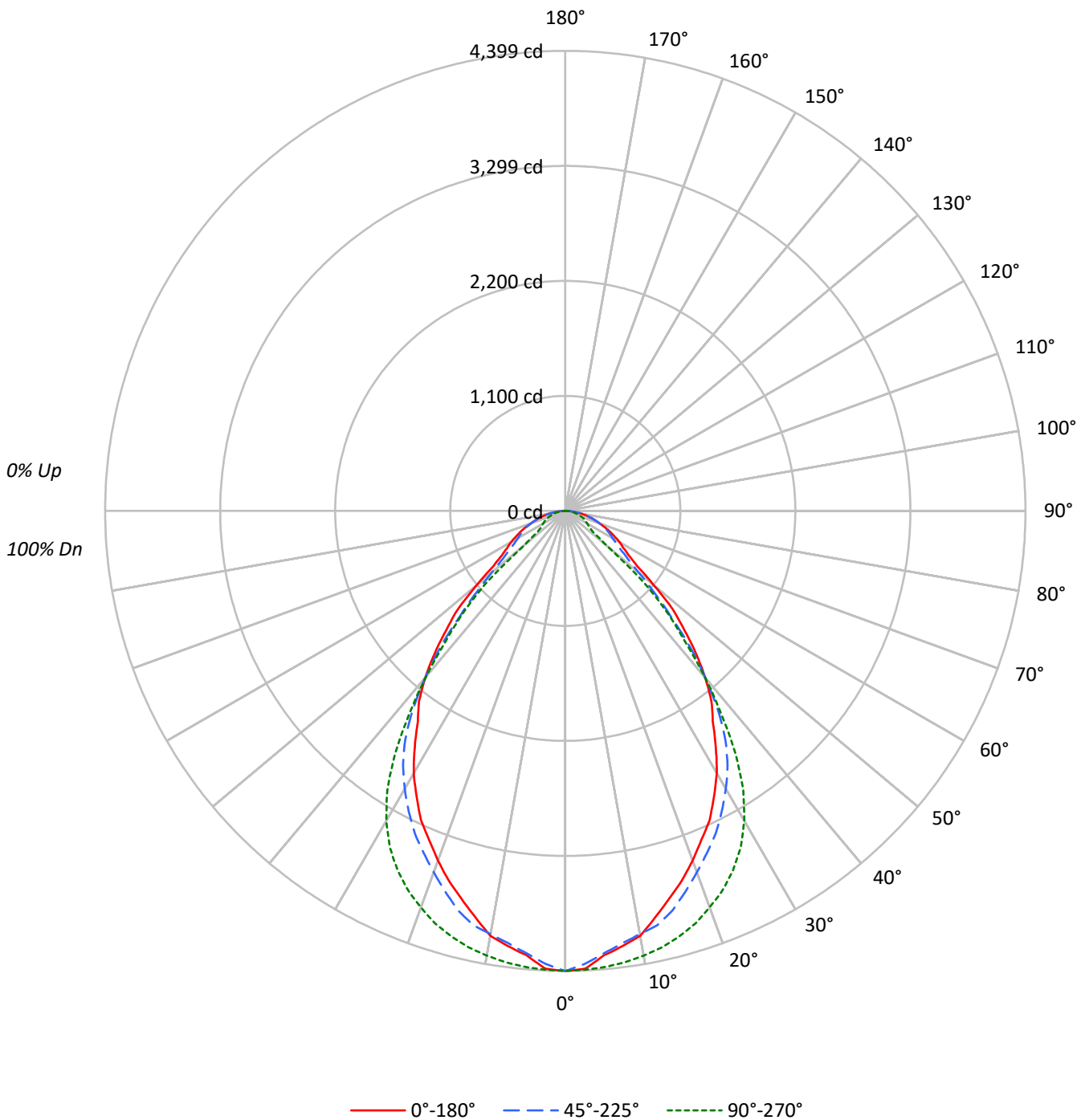
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7140.0 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.02 / 1.16 / 1.12
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 64.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 8.94
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P894047
CATALOG NUMBER: 4MB-9HL-LVRA-UNV-L940

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	91	86	101	95	90	85	91	87	83	88	85	82	85	82	80	80	80	80	78
3	96	87	80	75	94	86	80	75	83	78	73	80	76	72	78	74	71	71	71	71	69
4	89	79	72	66	87	78	71	66	76	70	65	73	68	64	71	67	63	63	63	63	62
5	83	72	65	59	81	71	64	59	69	63	58	67	62	58	66	61	57	57	57	57	55
6	78	66	59	53	76	65	58	53	64	57	53	62	57	52	61	56	52	52	52	52	50
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47	47	47	47	45
8	68	57	49	44	67	56	49	44	55	48	44	53	48	43	52	47	43	43	43	43	41
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	44	40	40	40	40	38
10	61	49	42	37	60	48	42	37	47	41	37	47	41	37	46	40	37	37	37	37	35

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	31302	31302	31302
5°	30457	30320	31267
10°	29810	29679	31194
15°	28271	29140	31019
20°	26931	27842	30546
25°	25618	26713	29766
30°	23801	25217	28104
35°	21342	23174	24650
40°	19336	19377	19273
45°	16167	14318	13964
50°	12211	10078	5710
55°	9184	8059	3601
60°	8535	7422	3469
65°	7941	7406	3475
70°	7264	7264	3420
75°	6889	7076	3304
80°	6363	6691	3393
85°	5551	5829	3706

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 45°
 Luminance: 16543 cd/sqm



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 CATALOG NUMBER: 4MB-9HL-LVRA-UNV-L940

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.4	5.7
10°-20°	1119.7	15.7
20°-30°	1587.8	22.2
30°-40°	1635.8	22.9
40°-50°	1142.5	16.0
50°-60°	548.2	7.7
60°-70°	384.6	5.4
70°-80°	240.5	3.4
80°-90°	74.4	1.0
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	3113.9	43.6
0°-40°	4749.7	66.5
0°-60°	6440.5	90.2
0°-90°	7140.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7140.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4399	4399	4399	4399	4399	
5°	4264	4259	4245	4356	4378	404
15°	3838	3866	3956	4069	4211	1081
25°	3263	3296	3403	3633	3792	1492
35°	2457	2524	2668	2724	2838	1548
45°	1607	1644	1423	1350	1388	1238
55°	740	704	650	416	290	694
65°	472	441	440	334	206	467
75°	251	247	257	222	120	264
85°	68	68	71	70	45	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4399.4	4399.4	4399.4	4399.4	4399.4
2.5°	4382.4	4368.8	4335.9	4396.0	4391.4
5°	4264.4	4258.8	4245.2	4356.3	4377.8
7.5°	4197.5	4186.2	4170.3	4292.8	4352.9
10°	4126.1	4139.7	4108.0	4220.2	4317.7
12.5°	3978.7	4015.0	4058.1	4145.4	4274.6
15°	3838.1	3866.5	3956.0	4069.4	4211.1
17.5°	3706.6	3739.5	3816.6	3986.6	4137.4
20°	3556.9	3602.3	3677.1	3894.8	4034.3
22.5°	3402.7	3444.7	3538.8	3772.3	3927.7
25°	3263.2	3296.1	3402.7	3632.9	3791.6
27.5°	3078.4	3139.6	3240.6	3462.8	3629.5
30°	2897.0	2949.2	3069.4	3256.4	3420.8
32.5°	2678.2	2754.1	2886.8	3029.7	3166.9
35°	2457.1	2524.0	2668.0	2723.5	2838.0
37.5°	2296.1	2314.2	2395.8	2389.0	2453.7
40°	2081.8	2118.0	2086.3	2001.3	2075.0
42.5°	1850.5	1893.5	1765.4	1666.8	1692.8
45°	1606.7	1644.1	1423.0	1350.4	1387.8
47.5°	1395.8	1392.4	1147.5	1098.7	1046.5
50°	1103.2	1139.5	910.5	819.8	515.9
52.5°	861.7	875.3	750.6	523.8	339.0
55°	740.4	704.1	649.7	416.1	290.3
57.5°	657.6	612.3	576.0	386.6	265.3
60°	599.8	548.8	521.6	367.4	243.8
62.5°	534.0	494.4	484.2	350.4	224.5
65°	471.7	441.1	439.9	334.5	206.4
67.5°	409.3	392.3	396.8	315.2	186.0
70°	349.2	345.8	349.2	290.3	164.4
72.5°	298.2	294.8	303.9	258.5	140.6
75°	250.6	247.2	257.4	222.2	120.2
77.5°	199.6	201.8	208.6	184.8	100.9
80°	155.3	155.3	163.3	145.1	82.8
82.5°	111.1	112.3	116.8	106.6	64.6
85°	68.0	68.0	71.4	70.3	45.4
87.5°	22.7	26.1	30.6	32.9	22.7
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	17.61	18.96	17.98	19.28	19.59	13.94	15.30	14.31	15.61	15.92
	3H	19.35	20.56	19.73	20.89	21.25	15.92	17.13	16.30	17.46	17.82
	4H	20.02	21.15	20.42	21.50	21.88	16.62	17.75	17.03	18.10	18.48
	6H	20.53	21.57	20.94	21.94	22.33	17.15	18.19	17.56	18.55	18.95
	8H	20.70	21.68	21.13	22.08	22.48	17.33	18.32	17.76	18.71	19.11
	12H	20.81	21.75	21.24	22.13	22.56	17.47	18.41	17.90	18.80	19.23
4H	2H	18.14	19.27	18.54	19.62	20.00	15.56	16.69	15.97	17.04	17.43
	3H	20.12	21.05	20.53	21.45	21.85	17.74	18.67	18.16	19.08	19.48
	4H	20.92	21.76	21.36	22.17	22.62	18.62	19.46	19.06	19.88	20.32
	6H	21.56	22.29	22.03	22.73	23.20	19.27	19.99	19.73	20.44	20.90
	8H	21.78	22.46	22.25	22.91	23.38	19.47	20.15	19.94	20.60	21.07
	12H	21.94	22.54	22.42	23.02	23.49	19.63	20.23	20.12	20.71	21.19
8H	4H	21.21	21.88	21.67	22.33	22.80	19.27	19.95	19.74	20.40	20.87
	6H	21.99	22.54	22.49	23.04	23.52	20.13	20.69	20.63	21.18	21.66
	8H	22.29	22.79	22.81	23.30	23.79	20.46	20.96	20.98	21.47	21.96
	12H	22.52	22.97	23.04	23.46	24.03	20.72	21.17	21.24	21.66	22.23
12H	4H	21.22	21.82	21.71	22.30	22.78	19.34	19.94	19.83	20.43	20.90
	6H	22.04	22.54	22.56	23.05	23.54	20.27	20.77	20.79	21.28	21.77
	8H	22.41	22.85	22.92	23.34	23.91	20.68	21.12	21.20	21.62	22.19